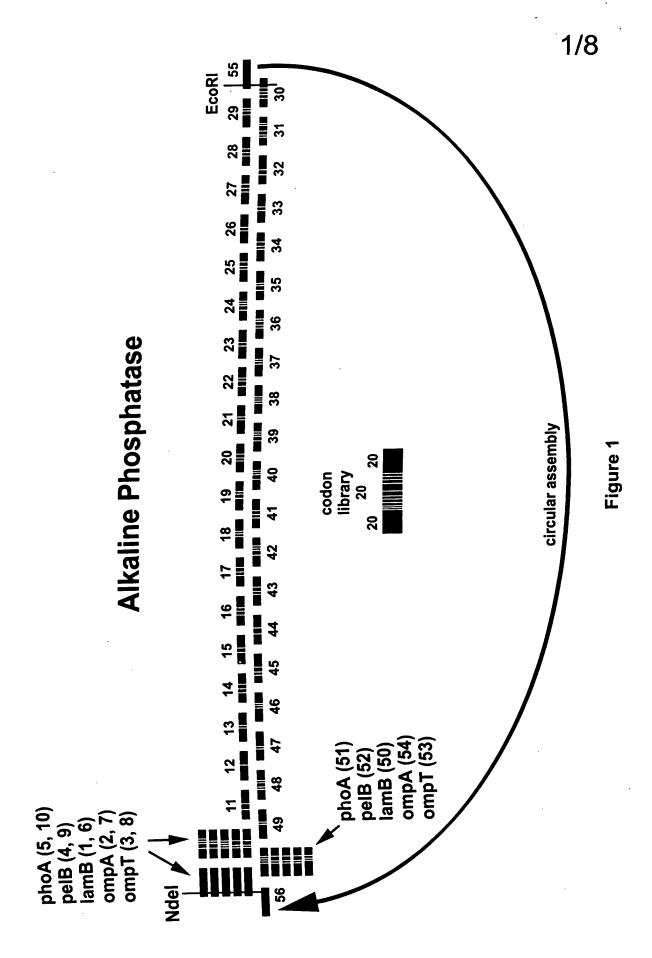
METHODS AND COMPOSITIONS FOR POLE TIDE ENGINEERING Phillip A. Patten, et al. Serial No.: 09/954,692 Attorney Docket No.: 02-020522US



THODS AND COMPOSITIONS FOR YPEPTIDE ENGINEERING Phillip A. Patten, et al.

Serial No.: 09/954,692

Attorney Docket No.: 02-020522US

Interferon Figures Protein sequences of interferon alphas to be shuffled C D L P Q T H S L G N R R A L I L L A Q M G R I S P F S C L 1.Consensus * * * 20 30 10 2. alpha I 3. alpha C 4. alpha H 5. alpha 4B TMM _ H 6. alpha 6 - R 7. alpha 7 8. alpha 8 T - M -- S 9. alpha D _ _ _ 10.alpha F - -11.alpha I 12.alpha WA KDRHDFGFPQEEFDGNQFQKAQAISVLHEM 1.Consensus 60 50 40 - T 2. alpha I 3. alpha C - B -4. alpha H H 5. alpha 4B E - - - R -6. alpha 6 T - - --H 7. alpha 7 - D - E K 8. alpha 8 - L 9. alpha D 10.alpha F T - L -11.alpha I P 12.alpha WA IQQTFNLFSTKDSSAAWEQSLLEKFSTELY 1.Consensus 80 70 - E - -2. alpha I _ _ _ _ _ - E 3. alpha C - - D E T -- N - -4. alpha H - - - E 5. alpha 4B - - D E R - - D v 6. alpha 6 7. alpha 7 - D E -- LDBT -8. alpha 8 - D DED T 9. alpha D T 10.alpha F -E 11.alpha I --DET--D--YI--F 12.alpha WA QQLNDLEACVIQEVGVEETPLMNEDSILAV 1.Consensus * * 100 - M -2. alpha I - M 3. alpha C 4. alpha H 5. alpha 4B W - G G - M -6. alpha 6 7. alpha 7 S Y I -- S - - M -8. alpha 8 - - - - -- - M -- - N - -- E R - G 9. alpha D V _ _ _ -

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10.alpha F

11.alpha I

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TETHODS AND COMPOSITIONS FOR OLYPEPTIDE ENGINEERING

Phillip A. Patten, et al. Serial No.: 09/954,692

Attorney Docket No.: 02-020522US

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ETHODS AND COMPOSITIONS FOR LYPEPTIDE ENGINEERING Phillip A. Patten, et al. Serial No.: 09/954,692

Attorney Docket No.: 02-020522US

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METHODS AND COMPOSITIONS FOR OLYPEPTIDE ENGINEERING Phillip A. Patten, et al. Serial No.: 09/954,692 Attorney Docket No.: 02-020522US

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2. alpha I 3. alpha C 4. alpha H 5. alpha 4B 6. alpha 7 8. alpha 8 9. alpha D 10.alpha F 11.alpha I 12.alpha WA 1.Consensus 2. alpha I 3. alpha C 4. alpha H 5. alpha 4B 6. alpha 4B 6. alpha 6 7. alpha 7 8. alpha 8 9. alpha D	т	c	C T	T CCCCC	T		T	C 460	T	T	T	TA-AA	T T	40) A	A	G - T - A	A	A	15() C		T		C	A	A	G G	A	

ETHODS AND COMPOSITIONS FOR LYPEPTIDE ENGINEERING

Phillip A. Patten, et al. Serial No.: 09/954,692 Attorney Docket No.: 02-020522US

1.Consensus	A G	A	T	T	A	A	G	G	A	G	G	A	A	G	G	A	T	Т	G	A	SEQ	ID	NO:	87
							490	0					500)										
2. alpha I		-	_	_	_	_	_	-	_	_	_	_	-	_	-	_	-	-	-	-	SEQ	ID	NO:	88
3. alpha C	- Т	٠ -	_	-	_	_	-	_	_	_	_	_	-	_	-	_	-	-	-	-	SEQ	ID	NO:	89
4. alpha H		_	_	_	_	_	-	_	_	_	_		_	_		_	-	-	-	-	SEQ	ID	NO:	90
5. alpha 4B		_	_	_	-	_	_	-	_	-	_	-	_	-	_	_	-	-	-	-	SEQ	ID	NO:	91
6. alpha 6		G	_	_	_	_	_	_	-	_	_	0	_	_	_	_	A	_	A	-	SEQ	ID	NO:	92
7. alpha 7	G -	_	-	_	_	-	_	-	_	_	_	_	_	_	_	-	_	_	-	-	SEQ	ID	NO:	93
8. alpha 8																					SEQ	ID	NO:	94
9. alpha D																					SEQ	ID	NO:	95
10.alpha F		_	_	_		-	_	_	_	_	_		-	_	-	_	A	-	_	-	SEQ	ID	NO:	96
11.alpha I		_	_		_	_	_	-	_	_	_	-	-	_	_	-	_	-	_	-	SBO	ID	NO:	97
12.alpha WA	G -	-	_	_	-	_	-	A	-	-	_	-	_	-	-	_	-	-	-	-	SEQ	ID	NO:	98